
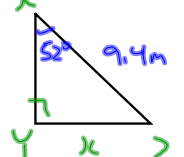


Trig Opener Primary Trig Ratios

Find $\angle \theta$

1) 

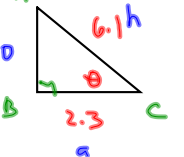
Find Side X

2) 

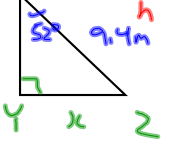
Apr 7-2:36 PM

Trig Opener Primary Trig Ratios

Find $\angle \theta$

1) 

Find Side X

2) 

SOH CAH TOA

$\cos \theta = \frac{A}{H}$

$\cos \theta = \frac{2.3}{6.1}$

$\cos \theta = (0.3770)$

$\theta = \cos^{-1}(0.3770)$

$\theta = 68^\circ$

$\sin 52^\circ = \frac{O}{H}$

$\sin 52^\circ = \frac{x}{9.4}$

$9.4 \sin 52^\circ = x$


$9.4(0.7880) = x$

$7.4 = x$

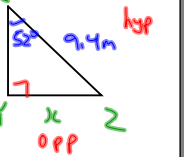
Apr 7-2:36 PM

Trig Opener Primary Trig Ratios

Find $\angle \theta$

1) 

Find Side X

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SOH CAH TOA

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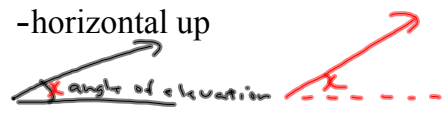
$9.4(0.7880) = x$

$7.4m = x$

Apr 7-2:36 PM


p274 Angle of Elevation (Inclination)

-horizontal up



Angle of Depression

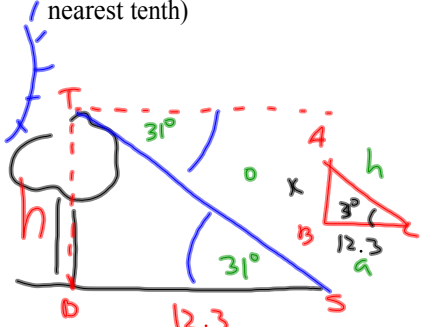
horizontal down (Declination)



Apr 6-10:12 AM

Trig Word Problems

i.e. A Tree casts a shadow 12.3 m long. If the angle of elevation of the sun's rays are 31° , how tall is the tree? (round to the nearest tenth)



SOH CAH TOA

Apr 7-1:45 PM

SOH CAH TOA

$\tan 31^\circ = \frac{x}{12.3}$

$12.3 \tan 31^\circ = x$

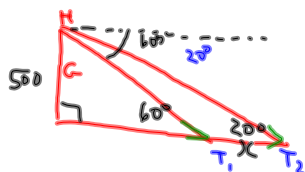
$12.3(0.6009) = x$

$7.4 = x$

The tree is 7.4m tall.

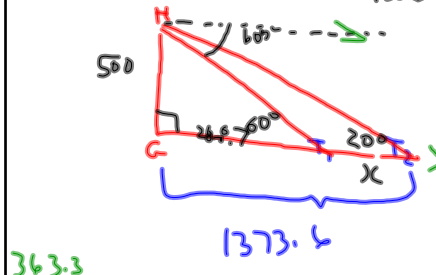
Apr 7-1:52 PM

A helicopter hovers 500m above a long straight road. Ahead of the helicopter on the road are two trucks. The angles of depression of the two trucks are 60° and 20° (respectively). How far apart are the two trucks?



Apr 7-1:54 PM

A helicopter hovers 500m above a long straight road. Ahead of the helicopter on the road are two trucks. The angles of depression of the two trucks are 60° and 20° respectively. How far apart are the two trucks?



Apr 7-1:54 PM

$$\begin{aligned} \tan 60^\circ &= \frac{500}{a} \\ \tan 60^\circ &= \left(\frac{500}{a}\right) \times a \\ a &= \frac{500}{\tan 60^\circ} \\ &= \frac{500}{1.7321} \\ &= 288.7 \end{aligned}$$

Oct 29-9:16 AM

$$\begin{aligned} \tan 20^\circ &= \frac{500}{a} \\ \tan 20^\circ &= \frac{500}{a} \\ a &= \frac{500}{\tan 20^\circ} \\ a &= \frac{500}{0.3640} \\ a &= 1373.6 \end{aligned}$$

$$1373.6 - 288.7 = 1084.9$$

The trucks are 1084.9m apart.

Oct 30-8:37 AM

$$\begin{aligned} \tan 70^\circ &= \frac{500}{a} \\ \tan 70^\circ &= \frac{2}{500} \\ \tan 70^\circ (500) &= 2 \\ 2.7475 (500) &= 2 \\ 1375.7 &= 2 \end{aligned}$$

$$1375.7 - 288.7$$

$$= 1087m \text{ apart}$$

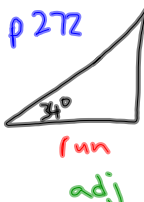
The two trucks are 1087m apart

Apr 6-10:34 AM

p 271-273
q.3-6, 8-10,12a, 13, 14

Apr 7-2:09 PM

12) p 272



SOH CAH TOA

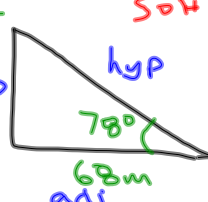
$$\frac{\text{rise}}{\text{run}} = 1.0$$

1.0 safe
1.0 > planks
1.6 > scaffolding

$\tan \theta = 1.6$
 $\tan \theta = 1.0$
 $\theta = \tan^{-1}(1.6) = 58^\circ$
 $\theta = \tan^{-1}(1.0) = 45^\circ$

Apr 7-2:23 PM

6 a)



SOH CAH TOA

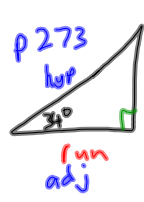
$$\tan 78^\circ = \frac{t}{68}$$

$$68(\tan 78^\circ) = t$$

$$320.0 = t$$

Apr 7-2:28 PM

12) p 273



SOH CAH TOA

$$\frac{\text{rise}}{\text{run}} = 1.0$$

1.0-1.6- planks
1.6 + - scaffolding

$\tan \theta = 1.0$
 $\theta = \tan^{-1}(1.0) = 45^\circ$
 $\tan \theta = 1.6$
 $\theta = \tan^{-1}(1.6) = 58^\circ$

34° = no safety precaution
 60° = scaffolding
 51° = planks

Nov 10-7:59 AM

<http://cordickcorner.wikispaces.com>

Nov 10-9:36 AM